Government of the People's Republic of Bangladesh
Ministry of Education
Secondary and Higher Education Division
Directorate of Secondary and Higher Education
Learning Acceleration in Secondary Education (LAISE) Project
(IDA Credit No. 74120- BD)

Terms of Reference (ToR)

Assignment Title: Review of Multimedia Classrooms (MMCs) and Needs Assessment for ICT Readiness and AI Literacy for Secondary School and Madrasah Teachers in Bangladesh

Contract Package: SD-15

1. Background

The Government of Bangladesh, through the Ministry of Education and the Directorate of Secondary and Higher Education (DSHE), is implementing the Learning Acceleration in Secondary Education (LAISE) Project with support from the World Bank. The project aims to improve learning outcomes, strengthen system resilience, and promote technology-enabled teaching and learning in secondary education institutions. Over the past decade, various initiatives have been undertaken by the Government and development partners to establish Multimedia Classrooms (MMCs) in secondary schools across Bangladesh. These initiatives included the supply of multimedia equipment, teacher training, development of digital content, interactive classrooms, ICT-enabled teaching-learning practices, and internet connectivity support.

Despite these investments, the availability and utilization of ICT facilities remain uneven across institutions. According to the DSHE Need Assessment Survey (December 2022), among **344,722 classrooms in 28,906 institutions**, only **37,107 classrooms function as Multimedia Classrooms**, averaging only **1.28 MMCs per institution**. Only **82 institutions (0.22%)** have complete multimedia coverage.

Similarly, BANBEIS Educational Statistics (2021) indicate that only:

- 36.06% of secondary institutions have ICT laboratories;
- 55.71% use computers for teaching-learning purposes; and
- 57.01% use internet facilities for pedagogical purposes.

These statistics demonstrate considerable disparities in ICT readiness and digital teaching capacity.

To address these challenges, the Learning Acceleration in Secondary Education (LAISE) Project will establish **20,680 Multimedia Classrooms in 10,340 selected secondary schools and madrasahs** (two MMCs per institution) with internet connectivity. The intervention aims to improve classroom teaching, promote interactive learning, and strengthen digital education.

The LAISE Project also plans to provide advanced ICT capacity development training for approximately **29,585 ICT teachers** focusing on Artificial Intelligence (AI) and emerging digital technologies. Unlike conventional ICT training, this program will emphasize AI-enabled teaching and learning, AI-powered educational tools, coding, cybersecurity, learning analytics, innovation, and future technologies.

Prior to these large-scale investments, DSHE intends to undertake an independent review of existing Multimedia Classrooms and conduct a nationwide assessment of ICT readiness and AI literacy among secondary school and madrasah teachers to generate evidence for refining implementation strategies, training design, equipment specifications, sustainability measures, and future scale-up. DSHE intends to engage a firm ("Consultants") for Review of Multimedia Classrooms (MMCs) and Needs Assessment for ICT Readiness and AI Literacy for Secondary School and Madrasah Teachers in Bangladesh.

2. Objectives of the Assignment

The overall objective of the consultancy is to undertake a comprehensive assessment of ICT infrastructure and institutional readiness, review the status and readiness of existing Multimedia Classrooms (MMCs), and assess teachers' ICT competencies, readiness for ICT-enabled teaching, and Artificial Intelligence (AI) literacy in secondary schools and madrasahs in Bangladesh. The findings will provide evidence for strengthening the implementation, utilization, sustainability and future scaling-up of ICT-enabled teaching and learning under the LAISE Project.

The specific objectives of the assignment are to:

1. Assess the existing ICT infrastructure and institutional readiness of secondary schools and madrasahs, including connectivity, electricity, ICT equipment, digital resources, technical support, maintenance, institutional arrangements and related systems required for ICT-enabled teaching and learning.
2. Review the design, implementation, functionality, utilization, effectiveness, and sustainability of existing Multimedia Classroom (MMC) initiatives implemented in secondary schools and madrasahs in Bangladesh.
3. Assess the status, functionality and readiness of existing MMCs to support effective ICT-enabled and multimedia-assisted teaching and learning..
4. Assess teachers' digital competencies, ICT-enabled pedagogical practices, ability to use MMC facilities and digital learning resources, and their readiness to integrate ICT into classroom teaching.
5. Assess the AI literacy, awareness and readiness of ICT teachers to use Artificial Intelligence and emerging digital technologies in teaching and learning, including responsible, ethical and safe use of AI..
6. Identify institutional, technical, operational, financial and human resource gaps, implementation challenges, sustainability issues and good practices affecting ICT infrastructure, MMCs and ICT-enabled teaching and learning.
7. Identify priority teacher competency and professional development needs and develop appropriate ICT and AI competency standards/frameworks and capacity development recommendations. .
8. Develop evidence-based and prioritized recommendations, implementation arrangements and a practical roadmap for strengthening ICT infrastructure, MMC readiness, teacher competencies and AI-enabled teaching and learning under the LAISE Project.

3. Scope of Services

The Consultants shall undertake a comprehensive assessment covering ICT infrastructure and institutional readiness, Multimedia Classroom status and readiness, and teacher competencies and readiness to deliver ICT-enabled teaching using ICT facilities and MMCs.

The assessment shall be organized under the following components:

Component A: ICT Infrastructure and Institutional Readiness Assessment

The Consultants shall assess the overall ICT infrastructure and institutional readiness of secondary schools and madrasahs to support current and proposed ICT-enabled teaching and learning under the LAISE Project.

The assessment shall include, but not be limited to:

A.1 ICT Infrastructure and Connectivity

The Consultants shall:

- Assess the availability, adequacy, functionality, condition and accessibility of ICT infrastructure and equipment in sampled institutions;
- Assess computers, laptops, tablets, displays, projectors, audio systems, printers and other relevant ICT equipment;
- Assess electricity supply, reliability, power backup arrangements and related requirements for ICT-enabled teaching;
- Assess internet availability, bandwidth, network stability, Wi-Fi coverage and other connectivity arrangements;
- Assess the availability and use of digital learning resources, software, platforms and applications;
- Assess student-to-device and teacher-to-device ratios, where applicable;
- Review the adequacy of ICT infrastructure to support technology-enabled teaching and learning at institutional level.

A.2 Institutional ICT Readiness

The Consultants shall assess:

- Existing institutional ICT policies, plans and management arrangements;
- Accessibility of ICT infrastructure;
- Institutional responsibility for ICT management and coordination;
- Technical support arrangements and availability of ICT personnel;
- Operation, maintenance, repair and replacement mechanisms;
- ICT asset management and equipment lifecycle arrangements;
- Integration of ICT with EMIS and other relevant digital education platforms;
- Cybersecurity, data protection and information security practices;
- Institutional capacity to adopt and sustain ICT-enabled teaching and learning;

- Institutional readiness for adopting advanced digital technologies, including AI-enabled educational applications, where relevant.

A.3 ICT Readiness Analysis

Based on the assessment, the Consultants shall:

- Determine the overall level of ICT infrastructure and institutional readiness of the sampled institutions;
- Identify factors affecting effective utilization and sustainability of ICT facilities;
- Develop an appropriate institutional ICT readiness framework/index, including measurable dimensions and indicators;
- Identify the infrastructure and institutional conditions required to support the effective use of ICT and MMC facilities under the LAISE Project.

The ICT readiness assessment shall be an overall assessment of institutional ICT readiness and shall provide the baseline against which infrastructure and institutional gaps can be identified and prioritized.

Component B: Multimedia Classroom Status and Readiness Assessment

The Consultants shall review existing Multimedia Classroom initiatives and assess the status, functionality, utilization, effectiveness and readiness of MMCs to support ICT-enabled teaching and learning.

B.1 Mapping and Review of MMC Initiatives

The Consultants shall:

- Map Multimedia Classrooms, Interactive Classrooms, ICT Laboratories and other relevant ICT-enabled classroom initiatives implemented by the Government, Development Partners and other organizations;
- Review the design, implementation approach, coverage and intended objectives of previous MMC initiatives;
- Assess the current distribution and operational status of MMCs in sampled institutions;
- Review relevant implementation, monitoring and evaluation reports and available evidence on MMC performance.

B.2 MMC Status, Functionality and Readiness

The Consultants shall assess:

- Availability, adequacy, functionality and condition of MMC equipment and facilities;
- Projectors, displays, computers, audio systems and other multimedia equipment;
- Electricity supply, internet connectivity and other supporting infrastructure;
- Classroom suitability, accessibility, safety and security arrangements;
- Equipment maintenance, repair and replacement arrangements;
- Technical support services;
- Equipment lifecycle and sustainability;

- Operational and maintenance costs;
- Institutional ownership and management arrangements; and
- Readiness of existing MMCs to support effective ICT-enabled and multimedia-assisted teaching and learning.

B.3 MMC Utilization and Pedagogical Assessment

The Consultants shall assess:

- Frequency and patterns of MMC utilization across subjects and grade levels;
- Teachers' use of MMC facilities and digital learning resources;
- Availability and use of digital content, LMS, online learning resources and relevant educational applications;
- Classroom practices associated with multimedia-assisted teaching;
- Student engagement and perceived benefits of MMC-supported teaching and learning;
- Factors affecting effective utilization of MMCs; and
- Evidence of contribution of MMCs to improved classroom practices and learning outcomes, based on available evidence and the methodology proposed by the Consultants.

B.4 MMC Sustainability and Lessons Learned

The Consultants shall identify:

- Institutional, technical, operational, financial and human resource constraints;
- Implementation challenges;
- Maintenance and sustainability issues;
- Good practices and lessons learned from previous MMC initiatives; and
- Factors that should be considered in the implementation and scaling-up of MMCs under LAISE.

Component C: Teacher ICT Competency, ICT-Enabled Teaching and AI Literacy Assessment

The Consultants shall assess the ICT competency, digital literacy, pedagogical use of ICT, readiness to use MMC facilities and AI literacy of ICT teachers in secondary schools and madrasahs.

C.1 Digital and ICT Competency

The assessment shall cover:

- Computer and internet literacy;
- Digital communication and online collaboration;
- Development and use of digital learning content;
- Use of Learning Management Systems (LMS) and other digital platforms;
- Digital classroom management;
- Digital assessment practices;
- Use of multimedia equipment and MMC facilities; and

- Ability to integrate ICT and digital resources into classroom teaching.

C.2 ICT-Enabled Teaching and Pedagogical Readiness

The Consultants shall assess teachers':

- Current ICT-enabled teaching practices;
- Ability to design and deliver ICT-supported lessons;
- Ability to select and use appropriate digital learning resources;
- Ability to use multimedia resources effectively in classroom instruction;
- Readiness to adopt blended and technology-enabled teaching approaches;
- Capacity to address challenges associated with technology use in classrooms; and
- Professional development needs related to ICT-enabled teaching.

C.3 AI Literacy and Awareness

The Consultants shall assess teachers' knowledge and understanding of:

- Fundamental concepts of Artificial Intelligence;
- Machine Learning and Generative AI;
- Responsible and ethical use of AI;
- Data privacy and cybersecurity;
- Opportunities, limitations and risks associated with AI in education; and
- Appropriate use of AI in the educational context.

C.4 Application of AI in Teaching and Learning

The Consultants shall assess teachers' familiarity with and readiness to use:

- AI-assisted lesson planning;
- AI-powered teaching and learning tools;
- AI-based assessment and feedback systems;
- AI productivity applications;
- AI-supported learning analytics; and
- Other emerging AI technologies relevant to classroom teaching.

C.5 Teacher Training Needs Assessment

Based on the competency assessment, the Consultants shall:

- Identify ICT and AI competency gaps;
- Assess the adequacy and relevance of previous ICT-related teacher training programmes;
- Identify priority professional development needs;
- Identify differentiated training needs based on teachers' existing competency levels, where appropriate; and

Tahura

- Recommend priority areas for professional development, including AI fundamentals, prompt engineering, AI integration into classroom teaching, learning analytics, coding and computational thinking, cybersecurity and digital safety, data literacy, digital citizenship and emerging technologies in education.

Component D: Consolidated Gap Analysis, Recommendations and Implementation Framework

Based on the findings of Components A, B and C, the Consultants shall undertake a consolidated gap analysis and develop practical recommendations for LAISE implementation and future scale-up.

The Consultant shall, but not be limited to:

- Consolidate findings from the ICT infrastructure and institutional readiness, MMC status and readiness, and teacher competency assessments;
- Identify institutional, infrastructure, technical, operational, financial, pedagogical and human resource gaps;
- Identify interdependencies between ICT infrastructure, MMC readiness and teacher competency;
- Assess the extent to which existing ICT infrastructure and MMC facilities can support the proposed ICT-enabled teaching and learning approaches and teacher capacity development interventions;
- Identify priority gaps and interventions based on agreed criteria;
- Recommend technical standards and specifications for ICT infrastructure and future MMCs, as appropriate;
- Recommend institutional arrangements for operation, maintenance, monitoring and technical support;
- Recommend strategies for strengthening ICT governance and institutional capacity;
- Develop an ICT Competency Framework for secondary school and madrasah teachers;
- Develop an AI Literacy and Competency Framework;
- Develop competency standards and a competency-based training framework/curriculum for ICT and AI-related professional development;
- Recommend a Continuous Professional Development (CPD) approach and certification framework, where appropriate;
- Develop an implementation roadmap for strengthening ICT readiness, MMC utilization and teacher capacity;
- Recommend priorities for the phased establishment and effective utilization of approximately 20,680 MMCs in 10,340 selected secondary schools and madrasahs under LAISE;
- Recommend measures for sustainability, operation and maintenance, connectivity, technical support and institutional ownership; and
- Develop policy and implementation recommendations for scaling up ICT-enabled and AI-integrated teaching and learning.

4. Methodology

The Consultants shall propose a robust mixed-method methodology appropriate to the objectives and scope of the assignment. The methodology shall ensure that the ICT infrastructure and institutional readiness, MMC status and readiness, and teacher competency and AI literacy assessments are mutually linked while maintaining clear analytical distinctions among the three assessment areas.

The methodology shall include, but not necessarily be limited to:

4.1 Desk Review and Secondary Data Analysis

The Consultants shall undertake a comprehensive desk review applicable to all components of the assignment. The review shall cover, as relevant:

- Government policies, strategies and plans;
- National ICT and education policies;
- LAISE Project documents, including the DPP and PAD;
- DSHE reports, assessments and administrative records relating to ICT, MMCs and teacher development;
- BANBEIS education statistics and relevant reports;
- Reports and documentation of previous ICT, MMC, Interactive Classroom and digital education initiatives implemented by the Government and Development Partners;
- Existing teacher training materials, competency frameworks and curricula;
- Relevant research and evaluation reports; and
- Relevant national and international good practices and benchmarks relating to ICT infrastructure, MMCs, ICT-enabled teaching, digital competencies and AI literacy.

The desk review shall inform the design of the assessment instruments, sampling strategy, indicators, institutional readiness framework/index, teacher competency assessment and gap analysis.

4.2 Institutional and ICT Infrastructure Assessment

The Consultants shall undertake a representative assessment of sampled institutions covering ICT infrastructure, connectivity, electricity, equipment, digital resources, institutional arrangements, technical support, operation and maintenance, cybersecurity and other relevant dimensions.

4.3 Multimedia Classroom Assessment

The Consultants shall undertake structured assessment of sampled MMCs, including physical verification where appropriate, equipment functionality, utilization, supporting infrastructure, maintenance arrangements, pedagogical use and sustainability.

4.4 Teacher Survey and Competency Assessment

The Consultants shall undertake a representative teacher survey and appropriate competency assessment to measure teachers' ICT competencies, ICT-enabled pedagogical readiness and AI literacy.

4.5 Qualitative Assessment

The methodology shall include appropriate Key Informant Interviews (KIIs), Focus Group Discussions (FGDs), classroom observations and/or case studies with relevant stakeholders to understand institutional, pedagogical, technical and operational factors influencing ICT/MMC utilization and teacher readiness.

4.6 Data Analysis and Readiness Framework

The Consultants shall develop appropriate indicators and analytical methods for assessing:

- ICT infrastructure and institutional readiness;
- MMC status and readiness;
- teacher ICT competency;
- ICT-enabled teaching readiness; and
- AI literacy.

Where an index or scoring framework is proposed, the Consultants shall clearly define the dimensions, indicators, methodology, weighting (if applicable), interpretation and limitations.

4.7 Gap Analysis and Validation

The Consultants shall consolidate quantitative and qualitative findings and undertake a structured gap analysis. Findings and recommendations shall be validated through consultations/workshops with DSHE, LAISE PIU and other relevant stakeholders.

The final methodology shall ensure representation across:

- Divisions and districts;
- Urban and rural institutions;
- Schools and madrasahs;
- Government and non-government institutions;
- Gender;
- Socio-economic characteristics; and
- Other relevant geographic and institutional characteristics.

5. Expected Outputs and Submission Requirements

The Consultants shall produce comprehensive, evidence-based reports, analytical outputs, frameworks, datasets and practical recommendations to support planning, implementation, monitoring and scaling-up of ICT-enabled teaching and learning under the LAISE Project.

All reports and supporting documents shall be submitted in both hard copy and editable electronic formats and shall become the property of DSHE.

The final outputs shall include, at a minimum:

1. **Executive Summary**, highlighting key findings, conclusions, recommendations and priority actions.
2. **ICT Infrastructure and Institutional Readiness Assessment Report**, presenting:
    - current ICT infrastructure and connectivity status;

- institutional ICT readiness;
- technical support and O&M arrangements;
- relevant institutional and governance arrangements;
- ICT Readiness Framework/Index and results; and
- identified infrastructure and institutional gaps.

3. **Multimedia Classroom Review and Readiness Assessment Report**, presenting:
   - mapping and status of existing MMC initiatives;
   - functionality and condition;
   - utilization and pedagogical use;
   - supporting infrastructure;
   - O&M and sustainability;
   - implementation challenges;
   - good practices and lessons learned; and
   - readiness of MMCs to support ICT-enabled teaching and learning.
4. **Teacher ICT Competency, ICT-Enabled Teaching and AI Literacy Assessment Report**, presenting:
   - teacher ICT and digital competency;
   - readiness to use ICT/MMCs for teaching;
   - AI literacy and awareness;
   - readiness to use AI in teaching and learning;
   - competency gaps; and
   - factors influencing effective technology adoption.
5. **Training Needs Assessment (TNA)** identifying competency gaps, priority training areas and capacity development requirements for ICT teachers.
6. **ICT and AI Competency Framework**, including:
   - ICT competency framework;
   - AI literacy and competency framework;
   - competency standards;
   - competency-based training framework/curriculum;
   - CPD approach/roadmap; and
   - certification approach, where appropriate.
7. **Consolidated Gap Analysis, Implementation Roadmap and Recommendations**, including:
   - priority gaps across ICT infrastructure, MMCs and teacher competencies;

Tahwa

- prioritization criteria;
- institutional readiness requirements;
- recommendations on connectivity, equipment, O&M and technical support;
- institutional and governance arrangements;
- teacher capacity development priorities;
- phased implementation considerations for approximately 20,680 MMCs in 10,340 selected secondary schools and madrasahs; and
- policy and implementation recommendations for ICT-enabled and AI-integrated teaching and learning.

8. **Monitoring, Evaluation and Results Framework**, including appropriate indicators for monitoring ICT readiness, MMC functionality and utilization, teacher competency development and AI literacy, as applicable.
9. **Presentation and Validation Materials**, including PowerPoint presentations and supporting materials for stakeholder consultations and validation workshops.
10. **Supporting Documentation**, including cleaned datasets, survey databases, questionnaires, interview and focus group discussion guides, data collection instruments, field reports, photographs (where applicable), analytical files and other relevant annexes developed under the assignment.

The Consultants shall ensure that the outputs are clearly traceable to Components A, B, C and D and that findings are not duplicated across reports. Each major finding and recommendation shall, where appropriate, identify the relevant evidence and assessment area.

6. Duration of the Assignment

The duration of the assignment will be **6 months**.

7. Consultants Team Composition

7.1 Key Experts

The broad qualifications of the Key Experts are given below. The responsibilities shall be assigned by the Consultants to complete all the deliverables in a professional manner:

1. Team Leader / Education Policy and Research Specialist

Education Qualification:

Master's degree in Education, Educational Planning and Management, Educational Research, Public Policy, Development Studies, Social Sciences, or a related discipline. A PhD in a relevant field will be considered an advantage.

Experience:

- 15 years of professional experience in education sector planning, policy analysis, research, program implementation, or management.
- Demonstrated experience as Team Leader/Project Manager in at least three large-scale education sector studies, assessments, evaluations, or technical assistance assignments.

- Experience in conducting national-level education research, institutional assessments, or policy studies.
- Proven experience in coordinating multidisciplinary teams and managing large-scale field-based assignments.

Duration: 6 person-months

2. Artificial Intelligence Specialist

Education Qualification:

Master's degree in Computer Science, Artificial Intelligence, Data Science, Information Technology, Software Engineering, or a related discipline.

Experience:

- 10 years of professional experience in Artificial Intelligence, Machine Learning, Digital Technologies, or ICT systems.
- Demonstrated experience in AI applications in education, digital learning, learning analytics, educational technology, or digital transformation initiatives.
- Experience in designing AI competency frameworks, AI capacity development programs, or AI-enabled educational solutions will be preferred.
- Familiarity with Generative AI, responsible AI, data privacy, and AI ethics.

Duration: 6 person-months

3. Education Technology / ICT Specialists – 2 Nos.

Education Qualification:

Master's degree in Educational Technology, Computer Science, Information Technology, Instructional Design, Education, or a related discipline.

Experience:

- 10 years of professional experience in educational technology, ICT-enabled teaching and learning, digital education, or technology integration in education.
- Demonstrated experience in planning, implementing, or evaluating ICT in education programs, multimedia classrooms, interactive classrooms, digital learning platforms, or e-learning initiatives.
- Experience in ICT infrastructure/readiness assessment, digital content development, Learning Management Systems (LMS), multimedia classroom assessment, teacher ICT competency development or educational technology assessment; and.
- Experience relevant to the assessment of institutional ICT readiness, ICT-enabled teaching and/or MMCs.

Number: 2

Duration: 5 person-months per expert (Intermittent Input during contract period).

4. Teacher Professional Development Specialist/ ICT-Enabled Pedagogy Specialists – 2 Nos.

Education Qualification:

Tahura

Master's degree in Education, Teacher Education, Educational Planning, Curriculum and Instruction, Educational Technology, or a related discipline.

Experience:

- 10 years of professional experience in teacher education, teacher professional development, curriculum development, or educational research.
- Demonstrated experience in designing teacher training programs, competency frameworks, professional development strategies, or capacity-building initiatives.
- Experience in integrating ICT and digital technologies into teaching and learning.
- Experience in teacher ICT competency assessment, ICT-enabled pedagogy and/or AI-related teacher professional development will be an advantage.

Number: 2

Duration: 5 person-months per expert (Intermittent Input during contract period).

5. Statistician / Data Scientist

Education Qualification:
Master's degree in Statistics, Applied Statistics, Data Science, Computer Science, Mathematics, Economics, Biostatistics, or a related discipline.

Experience:

- 10 years of professional experience in statistical analysis, survey design, data management, or quantitative research.
- Demonstrated experience in designing and managing large-scale education surveys and statistical analysis using software such as SPSS, STATA, R, Python, or similar tools.

Duration: 5 person-months (Intermittent Input during contract period)

6. Monitoring and Evaluation (M&E) Specialist

Education Qualification:

Master's degree in Monitoring and Evaluation, Statistics, Economics, Public Policy, Development Studies, Education, Social Sciences, or a related discipline.

Experience:

- 10 years of professional experience in monitoring and evaluation, results measurement, impact assessment, or performance monitoring.
- Demonstrated experience in developing monitoring frameworks, key performance indicators (KPIs), logical frameworks, results frameworks, and evaluation methodologies.
- Experience in education sector programs, institutional assessments, or development partner-funded projects.

Duration: 5 person-months (Intermittent Input during contract period)

7.2 Non-Key Experts

In addition to key experts, the following non-key expert/staff may be required to deliver the service. Indicative non-key staff is a guideline for the consultants. However, the Consultants are free to make their own estimate to propose non-key staff.

1. Survey Coordinator – 3 Nos.

Education Qualification:

Master's degree in Statistics, Education, Social Sciences, Development Studies, Public Administration, or a related discipline.

Experience:

- 7 years of professional experience in planning and managing large-scale surveys, field operations, or research assignments.
- Demonstrated experience in supervising enumerators, organizing field logistics, ensuring data quality, and coordinating nationwide data collection.

Number: 3

Duration: 4 person-months per expert (Intermittent Input during contract period).

2. Data Analyst – 3 Nos.

Education Qualification:

Master's degree in Statistics, Data Science, Computer Science, Information Technology, Economics, Mathematics, or a related discipline.

Experience:

- 7 years of professional experience in data management, statistical analysis, database management, or quantitative research.
- Demonstrated experience in data cleaning, validation, visualization, and statistical analysis using SPSS, STATA, R, Python, Power BI, Tableau, or similar software.

Number: 3

Duration: 4 person-months per expert (Intermittent Input during contract period).

7.3 Key & Non-Key Experts Inputs

The indicative staff inputs are tabulated below:

S.N.	Key Experts	Inputs in month		
		No	Man-month	Total (mm)
1	Team Leader / Education Policy and Research Specialist	1	6	6
2	Artificial Intelligence Specialist	1	6	6
3	Education Technology / ICT Specialist	2	5	10

4	Teacher Professional Development Specialist /ICT-Enabled Pedagogy Specialist	2	5	10
5	Statistician/Data Scientist	1	4	4
6	Monitoring & Evaluation Specialist	1	4	4
	Total Key-Staff Inputs			**40**
	Non-Key Experts/Other Experts			
1	Survey Coordinator	3	3	9
2	Data Analyst	3	3	9
	Total Non-Key-Staff Inputs			**18**
	Total Staff Inputs (Key + non-Key)			**58**

Total estimated key experts' input is **40-man months.**

Note:

a) The Consultants shall review the scope of services and may propose their own requirements for Key Experts and support staff necessary for satisfactory completion of the assignment.

b) The Financial Proposal shall include all direct and indirect costs required to perform the services.

c) The proposed number of experts for each position shall be consistent with the Technical Proposal.

8. Deliverables

The following table outlines the key deliverables of the assignment, which constitute the outputs of activities specified under the Scope of Services.

Note: T0 refers to the date of commencement of the Contract.

Sl. No.	Deliverable	Timeline
1	**Inception Report**, including detailed methodology, desk review plan, analytical framework, sampling strategy, ICT infrastructure and institutional assessment tools, MMC assessment tools, teacher competency/AI literacy assessment instruments, data collection tools, quality assurance arrangements and stakeholder consultation plan.	**T1 = T0 + 1 month**
2	**ICT Infrastructure and Institutional Readiness Assessment Report**, including findings on ICT infrastructure, connectivity, electricity, equipment, digital resources, institutional arrangements, technical support, O&M, cybersecurity and the proposed ICT Readiness Framework/Index.	**T2 = T0 + 2 months**
3	**Multimedia Classroom Review and Readiness Assessment Report**, including mapping, status, functionality, utilization,	**T3 = T0 + 3 months**

Sl. No.	Deliverable	Timeline
	pedagogical use, sustainability, challenges, good practices and readiness of existing MMCs to support ICT-enabled teaching and learning.	
4	**Teacher ICT Competency, ICT-Enabled Teaching and AI Literacy Assessment Report**, including teacher digital competency, ICT/MMC pedagogical readiness, AI literacy, AI application readiness and identified competency gaps.	**T4 = T0 + 3 months**
5	**Training Needs Assessment and Draft ICT/AI Competency Framework**, including competency gaps, priority training needs, ICT and AI competency standards/frameworks, draft competency-based curriculum/training framework and CPD approach.	**T5 = T0 + 4 months**
6	**Consolidated Gap Analysis, Draft Implementation Roadmap and Recommendations**, integrating findings from Components A, B and C and identifying priority infrastructure, MMC, teacher competency, institutional and sustainability gaps and proposed interventions.	**T6 = T0 + 5 months**
7	**Validation Workshop**, to present findings and obtain feedback from DSHE, LAISE PIU and relevant stakeholders.	**T7 = T0 + 5 months**
8	**Final Report**, incorporating comments from DSHE and the World Bank, as applicable, and comprising the Executive Summary, ICT Infrastructure and Institutional Readiness Assessment, MMC Review and Readiness Assessment, Teacher ICT Competency and AI Literacy Assessment, TNA, ICT/AI Competency Framework, consolidated gap analysis, implementation roadmap, recommendations, M&E framework and all supporting documentation.	**T8 = T0 + 6 months**
9	**Final Supporting Documentation**, including cleaned datasets, survey databases, questionnaires, data collection instruments, interview/FGD guides, analytical files, presentation materials, field reports, photographs where applicable and other relevant annexes.	**T9 = T0 + 6 months**

Payments shall be linked to satisfactory completion and formal acceptance of the corresponding deliverables by the Client in accordance with the agreed deliverable and payment schedule.

9. Management of The Assignment

The Client for the assignment will be the Project Implementation Unit (PIU). The assignment focal points will be the Project Director, Learning Acceleration in Secondary Education (LAISE) Project. The general obligations are as follows:

9.1. To be provided by the Client

The Client will make available all relevant reports, documents, information and data for the Consultants; designate counterpart personnel; and also provide support facilities to the individual experts working in the assignment.

9.2. To be provided by the Consultants

During the assignment, the Consultants shall be fully responsible for providing all necessary facilities, personnel, and logistical support required to fulfil the contractual obligations. This shall include, but not be limited to, backstopping experts, support staff, and adequate office facilities (including office space with telephone, internet connectivity, and related services), office equipment (such as desktops/laptops, printers, scanners), office supplies, and any other equipment and materials required for effective implementation of the assignment.

The Consultants shall make its own arrangements for all types of transportation required for the assignment. All such requirements shall be clearly described in the Technical Proposal, and the associated costs shall be included in the Financial Proposal.

10. Data Ownership, Confidentiality, Intellectual Property Rights, and Ethical Requirements

All information, data, datasets, reports, documents, photographs, audio recordings, transcripts, presentations, analytical outputs, software codes (if any), databases, training materials, and any other materials produced or collected under this assignment shall become the sole property of the Directorate of Secondary and Higher Education (DSHE).

Given that the assignment involves surveys of teachers and educational institutions and may involve classroom observations, the Consultants shall establish and implement appropriate protocols for informed consent, privacy, confidentiality, responsible data collection, data security and protection of respondents and institutions.

The Consultants shall:

- Obtain informed consent from respondents before collecting information through surveys, interviews, focus group discussions, classroom observations or other primary data collection activities, as applicable;
- Clearly explain the purpose of data collection, intended use of information, voluntary nature of participation and applicable confidentiality arrangements;
- Avoid collecting personally identifiable information unless necessary for the assignment and approved by the Client; Ensure appropriate anonymization or de-identification of survey, interview and observation data where applicable;
- Protect the privacy, dignity and confidentiality of teachers, students and other respondents; Establish appropriate procedures for classroom observations to avoid unnecessary disruption to teaching and learning;
- Ensure that photographs, audio/video recordings or other identifiable materials are collected only where appropriate consent and authorization have been obtained; Establish and maintain appropriate data security measures, including secure data storage, controlled access, backup procedures and protection against unauthorized access, alteration or loss of data; Ensure that all members of the Consultant's team, including sub-consultants, enumerators and support personnel, comply with the applicable confidentiality and data protection requirements;
- Comply with all applicable laws, regulations, and government policies of Bangladesh relating to data protection, privacy, research ethics, and information security, as well as any relevant requirements of the World Bank applicable to the assignment.

- Promptly notify DSHE of any actual or suspected data breach, unauthorized disclosure, or security incident affecting information collected under the assignment and take immediate corrective measures.

The Consultants shall submit, as part of the Inception Report, a **Data Collection, Consent, Privacy and Protection Protocol** describing the procedures to be followed for institutional surveys, teacher surveys, interviews, FGDs and classroom observations.

The Consultants shall hand over to DSHE all original and processed data, cleaned datasets, databases, questionnaires, codebooks, statistical analysis files, transcripts, photographs, audio recordings, field reports, GIS files where applicable, manuals, software codes if developed and other supporting documentation generated under the assignment.

All intellectual property rights, including copyrights and any other proprietary rights arising from the reports, databases, analytical outputs, methodologies specifically developed for the assignment, software applications (if any), training materials, presentations, and other deliverables prepared under this assignment shall vest exclusively in DSHE. The Consultants shall not publish, disseminate, or otherwise use any findings, reports, datasets, or other outputs arising from the assignment without the prior written approval of DSHE.

11. Selection Method

The consultants will be selected using the **Consultants' Qualifications -based Selection (CQS)** method as set for in the World Bank Procurement Regulations for IPF Borrowers, July 2016, revised November 2020. The Consultant shall comply with applicable World Bank policies on Environmental and Social Standards, SEA/SH prevention, data protection, and conflict of interest.